

REMARKS/ARGUMENTS

Claims 1, 3-4, 8-10, 12-16, 18-21 and 24-28 are presently pending in this application. Claims 2, 5-7, 11, 17 and 22-23 were previously canceled. Upon entry of the present amendment, Claim 28 will be amended to correct a typographical error. Claim 28 includes a reference to the pocket of Claim 27, but mistakenly depends from Claim 26, which does not recite a pocket. The amendment to Claim 28 will correct this typographical error. Claims 1, 3-4, 8-10, 12-16, 18-21 and 24-28 will remain pending in the case. No new matter is added by way of this amendment.

Response to Examiner Interview

A telephonic interview was conducted on March 10, 2010 between Examiner Davis Hwu, Applicant Royce McKim, and Applicants' legal representative, Attorney Michael W. Scheinberg (Reg. No. 36,919). No exhibits were shown and no demonstrations were conducted. Claim 1 was discussed in view of Freedman and Jones et al references. No amendments were proposed. Applicants stated that the dispersal pattern of the fire suppressant powder is improved in the claimed device compared to the Freedman device. While no agreement was reached with respect to the claims, Applicants appreciate the time and courtesy extended by the Examiner in the telephonic interview.

Claim Rejections under 35 U.S.C. § 103

Claims 1, 3, 4, 8-10, 12-16, 18-21 and 24-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Freedman in view of U.S. Patent No. 4,580,638 to Jones et al. (Jones). Applicants respectfully traverse the rejection of the claims.

Claim 1

Claim 1 recites, *inter alia*, "wherein the flexible sheet is folded into multiple layers such that the layers overlap." Applicants describe a folded sheet with overlapping layers to include a "front to back layering... as illustrated by the folded configuration of foil 6 in FIGS. 3, 4, 5, 6, 7 and 11" (Specification at ¶ 0039). Nowhere does Freedman teach a folded sheet, nor does he

teach folding the sheet. Instead, Freedman teaches a fire extinguishing means “in the form of a roll 52” and further describes that that the roll is “rolled up” before being secured. *Freedman* at col. 2, lines 24-64 and FIGS. 1-3.

A roll is not a folded sheet. Freedman’s flexible sheet is “rolled up” into a roll, whereas the claimed flexible sheet is folded into multiple layers that overlap. The flexible sheet behaves quite differently when unrolled or unfolded. Applicant describes that “[t]he action of unfolding the [folded] foil slows the decent rate of the dry agent and directs the dry agent in the controlled manner covering both the front and the rear burners with the dry agent” (*Specification* at ¶ 0022 and FIG. 1). In contrast, as the roll of Freedman unwinds, “the fire extinguishing powder 54 retained between the convolutions thereof is thrown and dispersed laterally and downwardly by this unwinding action as a cloud throughout the space which the hood overlies” (*Freedman* at col. 2, lines 53-56, and FIG. 1). Freedman’s rolled flexible sheet tends to compress the powdered fire suppression agent. Compression of the fire suppression agent causes the fire suppression agent to bind together into clumps. The occurrence of clumps in the fire suppression agent decreases the area over which the fire suppression agent is dispersed in response to a triggering event. Applicants’ folded flexible sheet eliminates the compression of the fire suppression agent, or reduces the compression of the fire suppression agent compared to Freedman’s roll. Applicants’ folded flexible sheet thereby eliminates the occurrence of clumps in the fire suppression agent, or reduces the occurrence of clumps in the fire suppression agent compared to Freedman’s roll. As a result, Applicants’ folded flexible sheet disperses the fire suppression agent over a broader area, providing an improved fire suppression capability over Freedman’s roll. The improved fire suppression capability of Applicants’ folded flexible sheet includes a greater likelihood that the fire suppression device will completely extinguish a fire that triggers the device and a larger effective area over which the fire suppression device can reliably extinguish triggering fires.

Conceding that Freedman does not anticipate Claim 1 under 35 U.S.C. § 102, the Examiner asserts, “Since there is no further limitation of any particular fold pattern, a teaching of a folded sheet such as that provided by Jones et al. meets the claim limitation of the flexible sheet being folded as recited.” *Final Office Action* at page 4, paragraph 5. However, Applicants respectfully note that Claim 1 recites:

a flexible sheet disposed with the cavity, the flexible sheet configured to disperse the fire suppression agent upon opening of the cover with the opening downwardly oriented, wherein the flexible sheet is folded into multiple layers such that the layers overlap;

In contrast, Jones discloses, at column 4, lines 29-42:

In operation, as the arm 36 is tripped, the electromagnets 56 will release the bottom flap 60 to drop the curtain 66 to completely surround the cooking unit 10. At the same time, Halon gas will be dispensed through valve 28, through conduits 24, 22, 20, 18 and to the nozzle 16 or to the nozzle 32. The curtain 66, which is of a fire-retardant material, simultaneously drops to surround the commercial cooking unit 10. Thus, the fire-retardant material is contained within the curtains and the fire is also suffocated due to the lack of oxygen. The need to clean up other portions of the restaurant is thus obviated by the curtain-drop system. Further, the use of the Halon gas also avoids messy clean-up problems.

That is, Jones teaches a fire suppression system that uses a gaseous fire suppression agent (e.g., Halon 1211) for the purpose of avoiding the cleanup that would be required following the dispersal of a non-gaseous fire suppression agent, such as baking soda. During a fire, the gaseous fire suppression agent is dispersed by nozzle 16 and/or nozzle 32. The nozzles are in fluid communication with pressure cylinder 26. Fire curtain 66 unfolds to completely surround cooking unit 10 and contain the gaseous fire suppression agent near cooking unit 10, thereby extinguishing the fire. In contrast to Claim 1, fire curtain 66 is not “configured to disperse the fire suppression agent upon opening of the cover” for at least two reasons.

First, Jones’ fire curtain is configured, upon the opening of the cover, to contain the fire suppression agent, not disperse it. Jones’ curtain is configured to contain the fire suppression agent because Jones’ fire suppression agent is a gas. It is well-known that gas molecules diffuse down a gradient from areas of high concentration to areas of low concentration. To maintain a concentration of gaseous fire suppression agent high enough to quickly and efficiently extinguish a stove top fire, Jones’ curtain unfolds to surround the stove top in the event of a fire. By surrounding the stove top, Jones’ curtain is configured to contain the gaseous fire suppression agent and not disperse it. Because Jones’ curtain contains the fire suppression agent and does

not disperse it, Jones' cannot be said to teach or disclose a folded flexible sheet configured to disperse the fire suppression agent upon opening of the cover, as claimed.

Second, Jones' system disperses the fire suppression agent (e.g., Halon gas) using a nozzle that is in fluid communication with a pressure cylinder filled with Halon gas. It is the nozzle, not the fire curtain, that disperses the Halon gas in Jones' system. Jones' fire curtain is unfolded to contain the Halon gas near the cooking unit to assist in suffocating the fire, as described above. Because Jones' system uses a nozzle to disperse the fire suppression agent, and not a folded flexible sheet, Jones cannot be said to teach or disclose a folded flexible sheet configured to disperse the fire suppression agent upon opening of the cover, as claimed.

The proposed combination of Freedman and Jones does not disclose each and every limitation of the rejected claims. Freedman discloses a system having a flexible sheet rolled into a roll for dispersing a powdered fire suppression agent on a cooking surface. Jones discloses a system having a nozzle connected to a pressure cylinder for dispersing a gaseous fire suppression agent near a cooking surface. Combining the two means for dispersing a fire suppression agent taught by Freedman and Jones (i.e., a roll and a nozzle) does not read on a folded flexible sheet configured for dispersing a fire suppression agent. Jones further discloses the system having a curtain that unfolds to surround the cooking surface and contain the gaseous fire suppression agent after it is dispersed by the nozzle. But the curtain is used to contain, not disperse, the fire suppression agent. Therefore, the proposed combination of Freedman and Jones does not disclose, "a flexible sheet disposed with the cavity, the flexible sheet configured to disperse the fire suppression agent upon opening of the cover with the opening downwardly oriented, wherein the flexible sheet is folded into multiple layers such that the layers overlap". Because the proposed combination of Freedman and Jones does not disclose each and every limitation of the Claim 1, the proposed combination of Freedman and Jones does not support a rejection under 35 U.S.C. § 103. Applicants respectfully request that the rejection of Claim 1 be withdrawn.

As motivation for the proposed combination of Freedman and Jones, the Examiner asserts, "It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Freedman by folding the sheet to form multiple layers instead of having the sheet rolled as taught by Jones et al. since the device will still carry out its intended function dispersing fire suppression agent regardless of whether the sheet is rolled up or folded." *Final Office Action* at p. 3, para. 4. Applicants respectfully

disagree with the assertion that it would have been obvious to a person having ordinary skill in the art to combine Freedman and Jones in the proposed manner for at least two reasons. First, Jones' folded curtain is not used to disperse a fire suppression agent. Jones' folded curtain is used to contain a fire suppression agent, that is, a gas dispersed by a nozzle. Because Jones teaches unfolding a folded flexible sheet to contain, not disperse, a fire suppression agent, it would not have been obvious to a person having ordinary skill in the art to modify Freedman's roll for dispersing a fire suppression agent with Jones' folded fire curtain for containing a fire suppression agent to achieve the rejected claim element of a folded flexible sheet configured to disperse a fire suppression agent upon opening of the cover. Second, Jones teaches dispersing a fire suppression agent with a nozzle and not with a folded flexible sheet. Because Jones teaches dispersing a fire suppression agent with a nozzle and not with a folded flexible sheet, it would not have been obvious to a person having ordinary skill in the art to replace Freedman's roll with Jones' fire curtain to perform the task that Jones' performs with a nozzle and not the fire curtain (i.e., dispersing a fire suppression agent). Because it would not be obvious to a person having ordinary skill in the art to combine the teachings of Freedman and Jones as proposed in the Final Office Action, the proposed combination of Freedman and Jones does not support a rejection under 35 U.S.C. § 103. Applicants respectfully request that the rejection of Claim 1 be withdrawn.

Claim 20

Claim 20 recites, *inter alia*, “folding the flexible sheet with the fire suppression agent placed between the layers of folds”. As described above, Freedman does not teach a folded flexible sheet, nor does Freedman teach a method for folding a flexible sheet, as claimed. Instead, Freedman teaches a fire extinguishing means “in the form of a roll 52” and further describes that that the roll is “rolled up” before being secured. *Freedman* at col. 2, lines 24-64 and FIGS. 1-3. Freedman does not teach or disclose “folding the flexible sheet with the fire suppression agent placed between the layers of folds”.

As described above, Jones teaches a folded fire curtain 66 that unfolds to completely surround cooking unit 10. *Jones* at column 4, lines 29-42. However, Jones does not teach folding the curtain with the fire suppression agent placed between the layers of the folds, as claimed. Jones does not teach folding the curtain with the fire suppression agent placed between

the layers of the folds for at least two reasons. First, Jones does not teach or disclose any method for folding fire curtain 66. Regarding the folding of fire curtain 66, Jones merely recites, at column 3, lines 64-67:

A fire curtain 66 is provided accordian style within the L-shaped container 50 and is secured at its upper end 68 to the top of the L-shaped container 50. The bottom of the curtain 66 is secured to the bottom flap 60 through conventional rivets. The fire curtain 66 can be any non-combustable woven or nonwoven flexible curtain material, such as Nomex III manufactured by DuPont.

That is, Jones discloses providing a fire curtain that is folded accordian style and secured at its upper end, but Jones includes no teaching or disclosure of any fire suppression agent being placed between the layers of the folds when folding fire curtain 66 accordian style. In fact, Jones is completely silent as to how fire curtain 66 is folded other than “fire curtain 66 is provided accordian style”.

Second, Jones teaches using a gaseous fire suppression agent, such as Halon 1211 gas. The gaseous fire suppression agent is stored in pressure cylinder 26, not fire curtain 66. Jones does not teach folding fire curtain 66 with the fire suppression agent placed between the layer of the folds presumably because fire curtain 66 is not suitable for storing a pressurized gas. Because Jones does not teach or disclose a method for folding fire curtain 66, and because Jones teaches storing the fire suppression agent in pressure cylinder 26 and not fire curtain 66, Jones does not teach or disclose the rejected claim element of “folding the flexible sheet with the fire suppression agent placed between the layers of folds”.

Freedman and Jones, alone or in combination, do not disclose at least the rejected claim element of “folding the flexible sheet with the fire suppression agent placed between the layers of folds”. Therefore, the proposed combination of Freedman and Jones does not disclose each and every limitation of the rejected claims. Because the proposed combination of Freedman and Jones does not disclose each and every limitation of the Claim 20, the proposed combination of Freedman and Jones does not support a rejection under 35 U.S.C. § 103. Applicants respectfully request that the rejection of Claim 20 be withdrawn.

The Examiner asserts, “It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Freedman by folding the sheet

to form multiple layers instead of having the sheet rolled as taught by Jones et al. since the device will still carry out its intended function dispersing fire suppression agent regardless of whether the sheet is rolled up or folded." *Final Office Action* at p. 3, para. 4. Applicants respectfully disagree. Jones teaches away from folding a flexible sheet with the fire suppression agent placed between the layers of folds, as claimed, because Jones teaches using a gaseous fire suppression agent to avoid the mess that is made and the costly clean up that follows the use of a powdered fire suppression agent. Jones at column 3, lines 34 to 43. A gaseous fire suppression agent cannot be placed between the folds of Jones' fire curtain because the gas is under pressure. In fact, Jones teaches placing the fire suppression agent in pressure cylinder 26 and not within the folds of fire curtain 66. Because Jones teaches using a gaseous fire suppression agent stored in a pressure cylinder for the express purpose of avoiding the mess created by the dispersal of a non-gaseous fire suppression agent, such as a fire suppression agent that is capable of being placed between the layers of folds of a folded flexible sheet, as claimed, Jones teaches away from Claim 20. Because Jones teaches away from Claim 20, it would not have been obvious to a person having ordinary skill in the art to modify Freedman with Jones as proposed in the Final Office Action. Because it would not be obvious to a person having ordinary skill in the art to combine the teachings of Freedman and Jones as proposed in the Final Office Action, the proposed combination of Freedman and Jones does not support a rejection under 35 U.S.C. § 103. Applicants respectfully request that the rejection of Claim 20 be withdrawn.

All Remaining Claims

Applicants submit that all remaining claims rejected under 35 U.S.C. § 103, being dependent from claims that are allowable for reasons stated above, are also allowable. Accordingly, Applicant requests that the objections to these remaining claims also be withdrawn.

Claim Rejections under 35 U.S.C. § 102

Claims 27 and 28 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,209,837 to Freedman (Freedman). Claim 27 recites, *inter alia*:

a flexible sheet for being rolled up within the cavity with the cover in the closed position, and configured to disperse the fire

suppression agent upon the uncovering of the opening with the opening downwardly oriented, wherein the flexible sheet includes at least one pocket for containing the fire suppression agent.

That is, Claim 27 recites that the flexible sheet includes a pocket for containing the fire suppression agent. A pocket is known in the art to be sealed, with the exception an opening that is used to put something in the pocket. Common examples of pockets include a shirt pocket that may be used hold a pen or pants pockets that may be used to hold a plurality of coins. Having only one opening and being substantially sealed elsewhere enables a pocket to hold a quantity of material. As stated in Applicants' specification, the flexible sheet can contain one or more pockets folded into a tube, and the fire suppression agent is placed inside the tube. See, for example, Applicants originally-filed Specification at paragraph 46. Claim 28 specifically recites, "wherein the at least one pocket includes a tube with an opening at one end of the flexible sheet for releasing the fire suppression agent from the opening of the tube as the end of the flexible sheet is unrolled."

Freedman discloses a fire extinguishing apparatus having fire extinguishing means comprising a roll of flexible, fire-resistant material, such as a metal foil. Specifically, Freedman discloses at column 2, line 24 to 34:

The essence of the present invention resides in the specific fire extinguishing means employed in connection with the hood structure 16. These means are in the form of a roll 52. Roll 52 is preferable formed of a sheet of flexible, dead soft fire resistant material such as metal foil. The sheet is rolled up and in the process of rolling up the sheet to form the roll 52, a layer of powder material 54 such as baking soda or any other powder having the ability to smother a fire when dispersed thereover is incorporated between the successive convolutions of the roll.

That is, Freedman discloses a roll made of metal foil having baking soda rolled up in the foil. The Examiner interprets the space within Freedman's roll containing the baking soda as reading on Applicants' pocket of Claim 27, asserting, "When the sheet is rolled up, it forms a tube having a pocket which hold the fire suppression agent 54 (Fig. 3)." *Final Office Action* at page 2, paragraph 3. Applicants respectfully disagree. Freedman's roll does not read on the pocket of Claim 27 because a roll is not a pocket. For example, the sides of the roll are open,

wherein the sides of a pocket are closed so that material contained within the pocket cannot fall out of the pocket. Because Freedman does not teach or disclose each and every element of Claim 27, as well as Claim 28 depending therefrom, Freedman does not support a rejection of Claims 27 and 28 under 35 U.S.C. § 102. Applicants respectfully request that the rejection of Claims 27-28 be withdrawn.

Conclusion

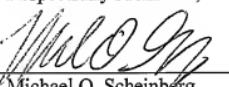
It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific objection, issue, or comment does not signify agreement with or concession of the rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this reply should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this reply, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

If the Commissioner determines that any additional fees or extensions are required, Applicant request that such extensions be granted and any fees be charged to Deposit Account 50-1635.

Applicant submits that all claims in the application are now in condition for allowance, and Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

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Respectfully submitted,



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